

WHAT IS CLAIMED IS:

1. A communication terminal, comprising:

an IF/RF unit that changes a radio frequency signal of received data into a received baseband signal and that changes a baseband signal of transmit data to a radio frequency signal for transmission within a packet;

a receive unit detects a data signal from the received baseband signal outputted by the IF/RF unit;

a data matching unit that receives the data signal from the receive unit and matches data communicated between the communication terminal and an outer processing device;

a controlling channel supervising unit that controls a transmission electric power of the communication terminal, by detecting a controlling signal within the received baseband signal, and supervises a channel occupying status;

a starting point controlling unit that decides a transmission point of the transmit data and generates a corresponding transmission controlling signal; and

a sending unit that outputs the transmit data, which is received from the data matching unit, to the IF/RF unit based on the corresponding transmission controlling signal.

2. The communication terminal of claim 1, wherein the starting point controlling unit randomly sets a re-transmission point of the packet when a prior communication of the packet to a base station fails.

3. The communication terminal of claim 1, wherein the communication terminal does not transmit separate a preamble for accessing a base station in addition to a preamble contained within the packet.

4. The communication terminal of claim 1, wherein the communication terminal transmits the transmit data in the packet with a preamble unit, a CRC unit, and a postamble unit.

5. The communication terminal of claim 1; wherein the controlling channel supervising unit judges that a base station failed to receive the transmit data, if a channel occupying signal of the controlling signal communicated by the base station is detected at both a point of time when the transmission of the packet is complete and when a propagation delay time between the communication terminal and the base station has expired after the packet transmission is complete.

6. The communication terminal of claim 5, wherein the sending unit suspends the transmission of the packet upon identifying the failure and the packet is allocated a random re-transmission point by the starting point controlling unit.

7. A communication terminal, comprising:

an IF/RF unit that changes a radio frequency signal of received data into a received baseband signal and that changes a baseband signal of transmit data to a radio frequency signal for transmission within a packet;

a receive unit detects a data signal from the received baseband signal outputted by the IF/RF unit;

a data matching unit that receives the data signal from the receive unit and matches data communicated between the communication terminal and an outer processing device;

an error detecting unit that checks for an error signal in the received baseband signal inputted to the receive unit and generates a corresponding error controlling signal; and

a sending unit that outputs the transmit data, which is received from the data matching unit, to the IF/RF unit based on the corresponding error controlling signal.

8. The communication terminal of claim 7, wherein the error detecting unit maintains a channel occupying status during and after the receipt of the packet by a base station, if the base station communicates the error signal to the communication terminal.

9. The communication terminal of claim 7, wherein the communication terminal sets a re-transmission point randomly if a communication of the packet to a base station fails.

10. The communication terminal of claim 7, wherein the communication terminal does not transmit a separate preamble for accessing a base station in addition to a preamble contained within the packet.

11. The communication terminal of claim 7, wherein the communication terminal transmits the transmit data in the packet with a preamble unit, a CRC unit, and a postamble unit.

12. The communication terminal of claim 1, wherein the communication terminal judges that a base station failed to receive the transmit data if a channel occupying signal of the received baseband signal communicated by the base station is detected at both a point of time when the transmission of the packet is complete and when a propagation delay time between the communication terminal and the base station has expired after the packet transmission is complete.

13. A method of data transmission, comprising:
communicating data within a packet frame unit from a terminal to a base station;
transmitting a channel occupying signal from the base station to the terminal when data transmission from the terminal is perceived by the base station;
continuing the communication of the packet data, while the channel occupying signal is active;
identifying whether the base station receives the communicated packet data; and

ending a process for communicating the packet data if the base station receives the communicated packet data.

14. The method of claim 13, further comprising suspending the packet data communication and restarting the communication of the packet data to the base station, if the base station fails to perceive the packet data communication.

15. The method of claim 13, wherein the terminal identifies whether an allocated communication channel is released during the packet data communication and then suspends the packet data communication and restarts the communication of the packet data to the base station, if the allocated communication channel is released.

16. The method of claim 13 further comprising suspending the packet data communication and restarting the communication of the packet data to the base station if the base station fails to receive the communicated packet data.

17. The method of claim 16, wherein the base station maintains the active channel occupying signal for the terminal until the packet data is successfully communicated to the base station.

18. The method of claim 16, wherein the terminal judges that the base station failed to receive the packet data, if the channel occupying signal communicated by the base station is detected at both a point of time when a transmission of the packet data is complete and when a propagation delay time between the terminal and the base station has expired after the packet data transmission is complete.

19. The method of claim 16, wherein the terminal randomly sets a re-transmission point for restarting the communication of the packet data.

20. The method of claim 13, wherein the packet frame unit further comprises a preamble unit, a CRC unit, and a postamble unit.

21. A communication terminal, comprising:
a variable power transmission means for communicating transmit data;
a receiving means for communicating received data; and
a signal detection means for detecting a busy signal and an idle signal within the received data, wherein

the signal detection means controls the variable power transmission means' power output, transmission timing, and ability to complete a communication of the transmit data, in response to the detected busy and idle signals.

22. The communication terminal of claim 21, wherein the variable power transmission means disrupts a current attempt to communicate the transmit data, varies the power output, re-establishes the transmission timing in a substantially random way for a subsequent attempt to communicate the transmit data, and subsequently attempts to communicate the transmit data, when the signal detection means fails to detect a transition from the idle signal to the busy signal during the current attempt to communicate the transmit data.

23. The communication terminal of claim 21, wherein the variable power transmission means disrupts a current attempt to communicate the transmit data, re-establishes the transmission timing in a substantially random way for a subsequent attempt to communicate the transmit data, and subsequently attempts to communicate the transmit data, when the signal detection means fails to detect a transition from the busy signal to the idle signal during the current attempt to communicate the transmit data.

24. The communication terminal of claim 21, wherein the variable power transmission means completes a current attempt to communicate the transmit data, when the signal detection means detects a transition from the idle signal to the busy signal and a subsequent transition from the busy signal to the idle signal during the current attempt to communicate the transmit data.

25. A communication terminal, comprising:

a transmission means for communicating transmit data;

a receiving means for communicating received data; and

a signal detection means for detecting a quality of the received data and generating

a busy signal and an idle signal in response to the detected quality of the received data, wherein

the transmission means communicates the idle signal in the transmit data when

the detected quality of the received data is below a first threshold value,

the transmission means communicates the busy signal in the transmit data when

the detected quality of the received data is equal to or above the first threshold value, and

the transmission means communicates the idle signal in the transmit data when

the detected quality of the received data is above a second threshold value and the communication of the transmit data is completed.

26. A communication system, comprising:

a variable power transmission means for communicating transmit data from a first terminal to a second terminal;

a receiving means for communicating receive data from the second terminal to the first terminal; and

a signal detection means for detecting a busy signal and an idle signal within the receive data, wherein

the signal detection means controls the variable power transmission means' power output, transmission timing, and ability to complete a communication of the transmit data in response to the busy and idle signals generated by the second terminal and detected by the first terminal.

27. A communication method, comprising:

communicating transmit data from a first terminal to a second terminal;

communicating receive data from the second terminal to the first terminal;

detecting a busy signal and an idle signal within the receive data; and

controlling a power output, a transmission timing, and an ability to complete the communication of the transmit data in response to the busy and idle signals generated by the second terminal and detected by the first terminal.

28. The communication method of claim 27, further comprising varying the power output, re-establishing the transmission timing in a substantially random way for a subsequent attempt to communicate the transmit data, and subsequently attempting to communicate the transmit data, when a transition from the idle signal to the busy signal is not detected during a current attempt to communicate the transmit data.

29. The communication terminal of claim 27, further comprising disrupting a current attempt to communicate the transmit data, re-establishing the transmission timing in a

substantially random way for a subsequent attempt to communicate the transmit data, and subsequently attempting to communicate the transmit data, when a transition from the busy signal to the idle signal is not detected during the current attempt to communicate the transmit data.

30. The communication terminal of claim 27, further comprising completing a current attempt to communicate the transmit data, when a transition from the idle signal to the busy signal and a subsequent transition from the busy signal to the idle signal are detected during the current attempt to communicate the transmit data.